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WATER SUPPLY OUTLOOK FOR WASHINGTON

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PROCUREMENT SECTION
CURRENT SERIAL RECORDS

Prepared by

U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE

Collaborating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

Data included in this report were obtained by the agencies named above in cooperation with the U.S. Forest Service, U.S. Geological Survey, National Park Service, and other Federal, State and Private organizations.

AS OF
MAR. 1, 1973

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters at key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 511 N. W. Broadway, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

STATE	ADDRESS
Alaska	204 E. 5th. Ave., Room 217, Anchorage, Alaska 99501
Arizona	6029 Federal Building, Phoenix, Arizona 85025
Colorado (N. Mex.)	P. O. Box 17107, Denver, Colorado 80217
Idaho	Room 345, 304 N. 8th. St., Boise, Idaho 83702
Montana	P. O. Box 970, Bozeman, Montana 59715
Nevada	P. O. Box 4850, Reno Nevada 89505
Oregon	1218 S. W. Washington St., Portland, Oregon 97205
Utah	4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111
Washington	360 U.S. Court House, Spokane, Washington 99201
Wyoming	P. O. Box 2440, Casper, Wyoming 82601

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



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WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

KENNETH E. GRANT

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C.

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STATE CONSERVATIONIST
SOIL CONSERVATION SERVICE
SPOKANE, WASHINGTON

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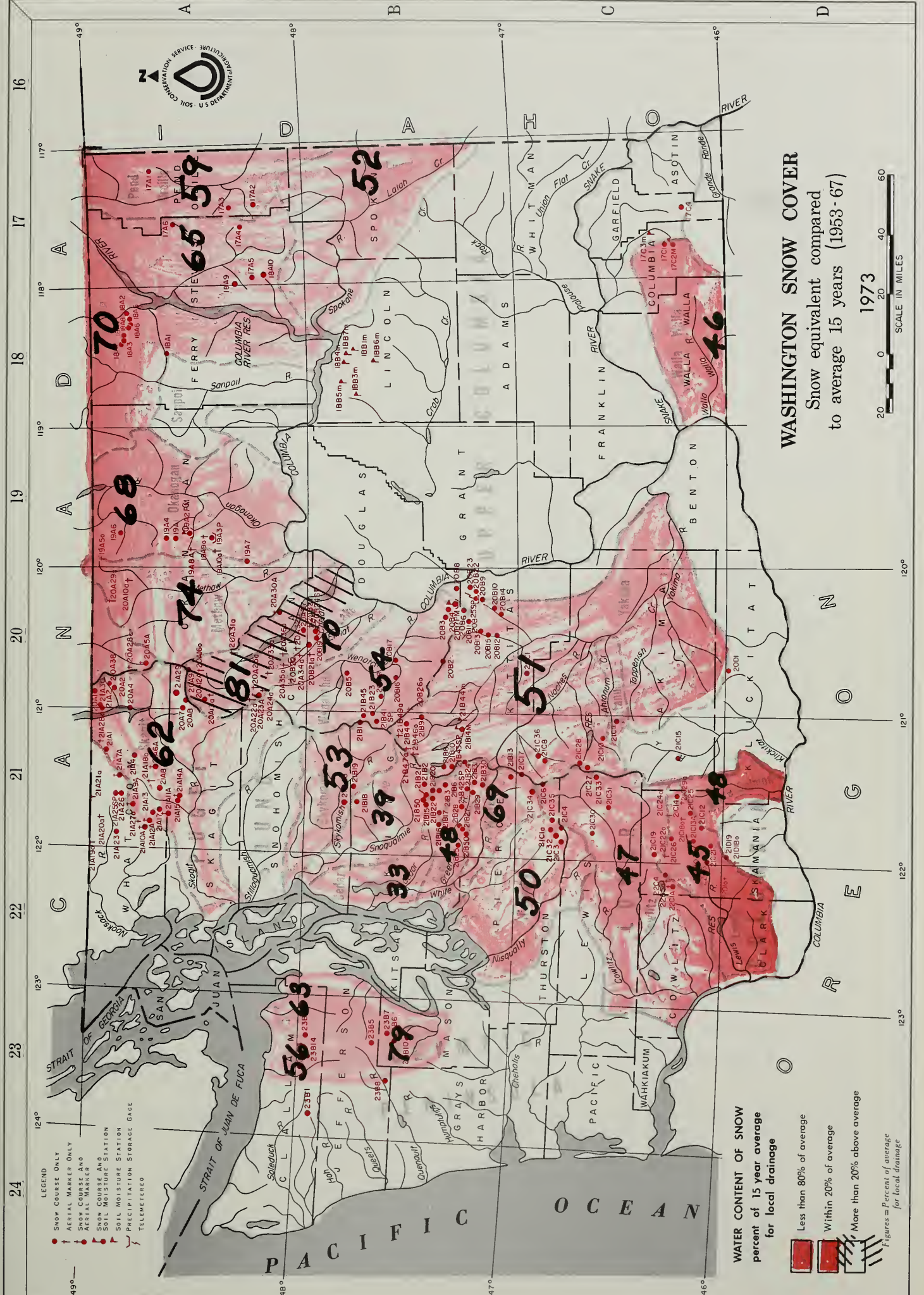
JOHN A. BIGGS

DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON
|||||

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor

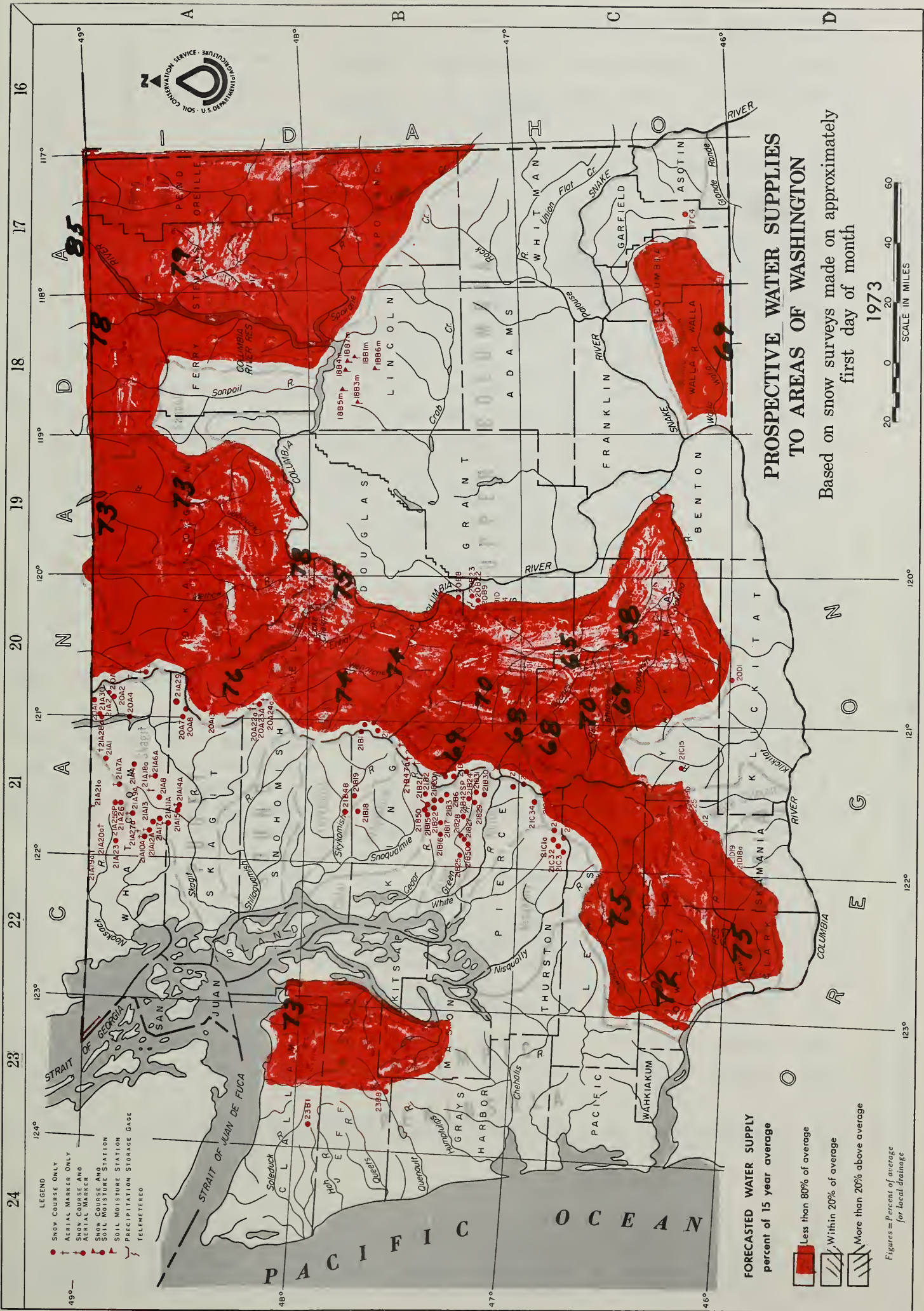
SOIL CONSERVATION SERVICE
360 U.S. COURTHOUSE
SPOKANE, WASHINGTON 99201



INDEX to WASHINGTON SNOW COURSES, SOIL MOISTURE STATIONS and PRECIPITATION STORAGE GAGES

NAME	NUMBER	SEC.	TWP.	RANGE	ELEV.
UPPER COLUMBIA DRAINAGE					
Pend Oreille River					
Boyer Mountain	17A2	7	31N	43E	5250
Bunchgrass Meadow	17A1	24	37N	44E	5000
Winchester Creek	17A3	30	33N	43E	2970
Kettle River					
Boulder Road	18A2	36	39N	36E	1450
Butte Creek	18A3	28	39N	35E	4070
Cabin Creek	18A8	5	38N	36E	3170
Gout Creek	18A1	26	39N	35E	3595
Snow Caps Creek	18A5	3	38N	36E	2150
Snow Caps Trail	18A6	5	38N	36E	2720
Summit G. S.	18A7	20	39N	35E	4600
Colville River					
Baird	17A6	19	36N	42E	3215
Carlson	18A9	34	32N	38E	2885
Chewelah	17A4	11	32N	41E	4925
Stranger Mountain	17A5	26	31N	38E	4990
Togo	18A10	6	29N	38E	3370
Sanpoil River					
Sherman Creek Pass	18A1	19	36N	35E	5350
Okanogan River					
Clark	19A8A	2	36N	23E	7000
Muckamuck	19A9A	20	36N	24E	6750
Mutton Creek No. 1	19A1	30	37N	24E	5700
Mutton Creek No. 2	19A4	19	37N	24E	6000
Payson	20A2A	32	40N	18E	4300
Rusty Creek	19A3P	18	35N	24E	4000
Salmon Meadows	19A2PM	33	37N	24E	4500
Starvation Mtn.	19A10A	15	35N	23E	6750
Tout's Coulee	19A6	30	39N	25E	2845
Methow River					
Billy Goat Pass	20A10A	10	38N	20E	6400
Dollar Watch	20A29A	8	39N	20E	7000
Harts	20A5A	7	37N	18E	6500
Horseshoe Basin	19A5A	15	40N	23E	7000
Loup Loop	19A7	36	34N	23E	4650
Chelan Lake Basin					
Cloudy Pass	20A2A	12	31N	15E	6500
Greenwood Flat	20A25A	3	31N	16E	3540
Little Meadows	20A24A	8	31N	16E	5275
Lyman Lake	20A23A	18	31N	16E	5900
Park Creek Flat	20A13A	18	34N	16E	2220
Park Creek Ridge	20A12A	7	34N	16E	4600
Petersons	20A16A	3	34N	17E	3750
Rainy Pass	20A9	21	35N	17E	4780
Safety Harbor	20A30A	32	31N	20E	6300
War Creek Pass	20A31A	34	33N	18E	6500
Entiat River					
Brief	20B19	34	28N	19E	1600
Entiat Meadows	20A33A	28	31N	17E	4800
Entiat River Trail	20A34A	2	29N	17E	3150
Four Mile Ridge	20B27A	15	28N	19E	7000
Fox Camp	20A36A	17	30N	18E	6510
Pope Ridge	20B20	22	29N	18E	4300
Pope Ridge Snow Pillow	20B24SP	22	29N	18E	4300
Pugh Ridge	20A32A	34	30N	18E	6400
Shady Pass	20A37	20	29N	19E	6200
Snow Brushy	20A35A	21	30N	17E	3850
Tomay Creek	20B21A	10	28N	18E	5300
Wenatchee River					
Berne-Mill Creek	21B23	7	26N	15E	2925
Berne-Mill Creek (New)	21B41SP	13	26N	14E	3240
Blewett Pass No. 2	20B2	35	22N	17E	4270
Chiwaukum G. S.	20B16	4	25N	17E	1810
Lake Wenatchee	20B5	33	27N	17E	1870
Leavenworth R. S.	20B17	1	24N	17E	1127
Nerrett	20B18	14	26N	16E	2140
Stevens Pass	21C21	25	28N	13E	4070
Stevens Sand Shed	21B45	12	26N	19E	3700
Trough #2	20B25SP	10	20N	20E	5310
LOWER COLUMBIA DRAINAGE					
Asotin Creek					
Spruce Springs	17C4	9	8N	40E	5700
Mill Creek					
Couse	17C3M	2	9N	35E	3370
Homestead	17C1	11	9N	40E	4030
Martin Springs (Helmets SN)	17C2M	23	9N	40E	4400
Klickitat River					
Satus Pass	20D1	21	6N	17E	4030
West Fork Cabin	21C15	23	9N	12E	3000
White Salmon River					
Cultus Creek	21C12	35	7N	BE	4000
Lewis River					
Blue Lake	21C22A	19	9N	BE	4800
Bob's Trail	21C21	25	BN	7E	2200
Calamity Ridge	22D1A	4	5N	5E	2500
Council Pass	21C18A	24	9N	9E	4200
White River					
Alpine Meadow	21B48	31	27N	9E	3500
Ollalie Meadows	21B2	19	22N	11E	3625
South Fork Tolt	21B18	26	26N	9E	1900
Snoqualmie River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16	31	22N	9E	2500
Mt. Washington	21B15	8	22N	9E	3000
Mt. Washington New	21B50	8	22N	9E	3000
Rex River	21B17	11	21N	9E	2400
South Fork Cedar	21B6	24	21N	10E	3000
Tinkham Creek	21B20	1	21N	10E	3400
Cedar River					
City Cabin	21B3	10	21N	10E	2390
Mt. Gardner	21B21	30	22N	10E	3300
Mt. Gardner Aux.	21B22	31	22N	10E	2500
Mt. Lindsay	21B16	31	22N	9E	2500
Mt. Washington	21B15	8	22N	9E	3000
Mt. Washington New	21B50	8	22N	9E	3000
Rex River	21B17	11	21N	9E	2400
South Fork Cedar	21B6	24	21N	10E	3000
Tinkham Creek	21B20	1	21N	10E	3400
Green River					
Airstrip	21B24	18	20N	11E	1800
Charley Creek	21B25	27	21N	BE	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	BE	2900
Grass Mountain No. 3	21B28	12	20N	BE	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	21	20N	BE	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B45SP	14	20N	11E	5000
Stampede Pass	21B40	25	21N	11E	3000
Twin Camp	21B30	18	19N	11E	4100
White River					
Corral Pass	21B13	30	18N	11E	6000
White River Campground	21C34	4	16N	9E	
Nisqually River					
Ghost Forest	21C4	23	15N	BE	4550
Longmire	21C3	29	15N	BE	2760
Paradise Park (New)	21C35	13	15N	BE	
Stem Glade	21C1	13	15N	BE	5050
White River					
Corral Pass	21B13	30	18N	11E	6000
White River Campground	21C34	4	16N	9E	
Green River					
Airstrip	21B24	18	20N	11E	1800
Charley Creek	21B25	27	21N	BE	1200
Cougar Mountain	21B42SP	21	21N	9E	3200
Grass Mountain No. 2	21B27	14	20N	BE	2900
Grass Mountain No. 3	21B28	12	20N	BE	2100
Lester Creek	21B29	36	20N	10E	3100
Lynn Lake	21B50	21	20N	BE	4000
Sawmill Ridge	21B31	5	19N	11E	4700
Snowshoe Butte	21B45SP	14	20N	11E	5000
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Mt. Lindsay	21B16	31	22N	9E	2500
Mt. Washington	21B15	8	22N	9E	3000
Mt. Washington New	21B50	8	22N	9E	3000
Rex River	21B17	11	21N	9E	2400
South Fork Cedar	21B6	24	21N	10E	3000
Tinkham Creek	21B20	1	21N	10E	3400
Snoqualmie River					
Alpine Meadow	21B48	31	27N	9E	3500
Ollalie Meadows	21B2	19	22N	11E	3625
South Fork Tolt	21B18	26	26N	9E	1900
Skykomish River					
Lake Elizabeth	21B19	33	26N	10E	2900

LEGEND
 NUMBERING SYSTEM EXAMPLE
 SNOW COURSE ONLY
 21A7A AERIAL MARKER ONLY
 21A7B SNOW COURSE AND AERIAL MARKER
 21A7C SNOW COURSE AND SOIL MOISTURE STATION
 21A7D SNOW COURSE AND PRECIPITATION STORAGE GAGE
 21A7E SNOW COURSE AND PRECIPITATION STORAGE GAGE
 21A7F SNOW COURSE AND PRECIPITATION STORAGE GAGE
 21A7SP SNOW PILLON



RESERVOIRS

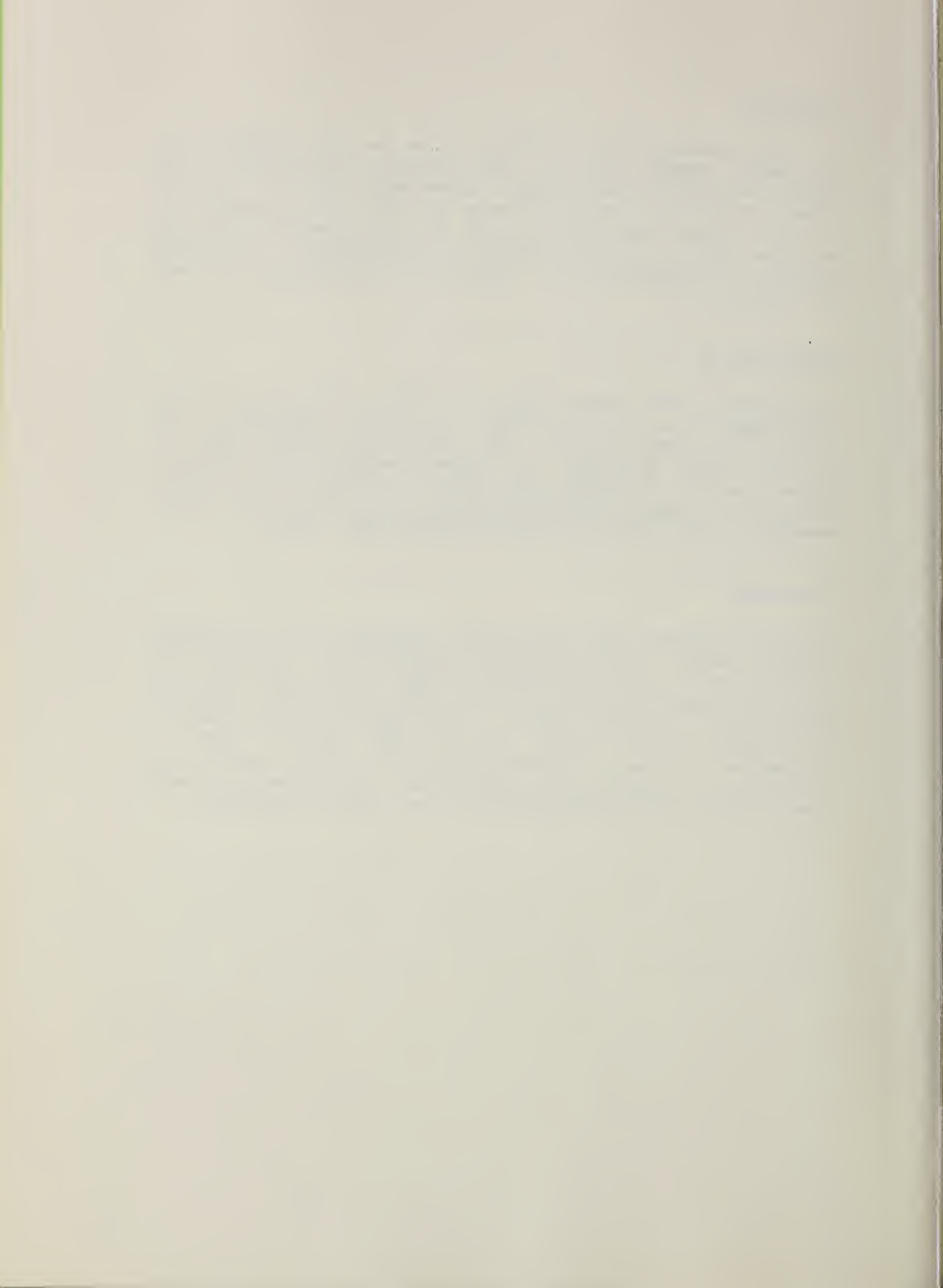
The water storage picture continues to be the only bright spot in the water supply picture. The irrigation reservoirs in the Yakima drainage are 15% greater than average, while the two small reservoirs in the Okanogan drainage are 25 to 100% greater than normal. Chelan Lake appears to be the only reservoir that does not have normal or greater amounts of stored water. This power reservoir is scheduled to be filled as soon as possible for summer storage.

PRECIPITATION

As reported by the National Weather Service, February precipitation ranged from 79% below normal for central Washington to 12% above for the north central. This precipitation accumulated for the four months of winter now ranges, percentagewise, from 28% below normal to 17% below. This lack of rainfall, and the lack of snow fall at upper elevations during a month when it is vitally necessary, will result in a much depleted water supply.

STREAMFLOW

As can be imagined from the previous statements, the rivers had a very low runoff during the month, so what little snow that fell at the upper elevations and the rain that fell in the valleys has gone to maintain the soil moisture in the soil mantle. Flows reported by the Geological Survey ranged from 70% below normal for the Chehalis to 18% below in the north eastern corner of Washington. Forecasts of streamflow for the coming runoff period can be found in the following tabulation. These forecasts range from a high of 14% below normal to a low of 42% below normal.



STREAMFLOW FORECASTS - MARCH 1973

The following summarized runoff forecasts are based principally on mountain snow cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. Streamflow figures for 1972 are preliminary and subject to revision.

Basin, Stream and Station	Forecast Runoff 1973	% 15-Yr. Avg.	Seasonal Streamflow in Thousands of Acre-Ft				15-Yr Average 1953-67
			Fore- cast Period	1972	1971	1970	
<u>COLUMBIA BASIN</u>							
<u>Columbia River System</u>							
Columbia River	39560	85	Apr-Sep	52590	48592	34490	46368
at Birchbank <u>1/</u>	32330	86	Apr-Jul	42700	39462	27840	37480
	23250	86	Apr-Jun	31000	29759	20890	27040
Columbia River	55570	80	Apr-Sep	83880	75360	54617	69458
at Grand Coulee <u>1/</u>	46400	79	Apr-Jul	71820	64444	46563	58899
	34400	75	Apr-Jun	56200	51550	37574	45889
Columbia River	59500	78	Apr-Sep	98040	84965	58544	76241
bl Rock Island Dam <u>1/</u>	48300	75	Apr-Jul	84520	73096	50236	64777
	37200	74	Apr-Jun	66100	58235	40675	50387
Columbia River	78500	75	Apr-Sep	134620	123427	88146	105176
at The Dalles, OR <u>1/</u>	65000	72	Apr-Jul	117810	107702	76054	90050
	50700	70	Apr-Jun	96290	88936	62847	72410
<u>Pend Oreille River System</u>							
Pend Oreille River	11220	70	Apr-Sep		19190	14737	16030
bl. Box Canyon	10200	69	Apr-Jul		17980	13676	14788
	8670	68	Apr-Jun		15640	11985	12754
<u>Kettle River System</u>							
Kettle River	1495	78	Apr-Sep		2240	1099	1918
nr. Laurier	1435	79	Apr-Jul		2177	1068	1821
	1285	78	Apr-Jun		1927	1004	1644

1/ Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

Streamflow Forecasts - March 1973 (Cont.)

Streamflow Forecasts - March 1973 (Cont.)				Seasonal Streamflow in Thousands of Acre-Ft			
Basin, Stream and Station	Forecast Runoff 1973	15-Yr. Avg.	Fore- cast Period	15-Yr. Average			
				1972	1971	1970	
<u>Kettle River System (Cont.)</u>							
Colville River	121	79	Apr-Sep		170	94	153
at Kettle Falls	111	79	Apr-Jul		158	86	141
	103	79	Apr-Jun		146	80	131
<u>Spokane River System*</u>							
Spokane River	1750	56	Apr-Sep		3907	2514	3151
at Post Falls ID <u>2/</u>	1660	54	Apr-Jul			2418	3055
	1610	55	Apr-Jun			2274	2913
<u>Okanogan River System</u>							
Similkameen River	1110	73	Apr-Sep	3162	1931	850	1525
nr. Nighthawk	1035	73	Apr-Jul	2998	1840	808	1419
	877	73	Apr-Jun	2505	1576	739	1197
Okanogan River	1270	73	Apr-Sep	3824	2225	923	1738
nr. Tonasket	1100	70	Apr-Jul	3481	2077	864	1578
	925	70	Apr-Jun	2846	1772	785	1318
<u>Methow River System</u>							
Methow River	825	78	Apr-Sep		1339	622	1054
nr. Pateros	765	78	Apr-Jul		1259	587	981
	660	79	Apr-Jun		1061	532	834
<u>Chelan River System</u>							
Chelan River	950	75	Apr-Sep	1965	1550	905	1266
at Chelan <u>3/</u>	850	76	Apr-Jul	1717	1352	816	1119
	660	76	Apr-Jun	1309	1019	683	870
Stehekin River							
at Stehekin	690	76	Apr-Sep	1093	1093	678	904
	585	76	Apr-Jul	927	927	589	772
	450	77	Apr-Jun	657	657	478	586
Entiat	172	--	Apr-Sep		310	160	--
nr. Ardenvoir	158	--	Apr-Jul		280	148	--
	133	--	Apr-Jun		209	129	--

- * Forecasts made by Jack A. Wilson, Soil Conservation Service, Boise, Idaho.
- 2/ Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.
- 3/ Observed flow corrected for storage in Lake Chelan.

Streamflow Forecasts - March 1973 (Cont.)

Basin, Stream and Station	Forecast Runoff 1973	% 15-Yr. Avg.	Seasonal Streamflow in Thousands of Acre-Ft.				
			Fore- cast Period	1972	1971	1970	15-Yr. Average 1953-67
<u>Wenatchee River System</u>							
Wenatchee River	992	74	Apr-Sep		1637	1019	1333
at Plain	907	74	Apr-Jul		1448	941	1204
	713	75	Apr-Jun		1045	804	952
Wenatchee River	1350	74	Apr-Sep	2808	2241	1416	1814
at Peshastin	1240	75	Apr-Jul	2481	1999	1318	1651
	1000	76	Apr-Jun	1891	1454	1132	1316
Stemilt Basin nr. Wenatchee	105*	80	May-Sep	145*	148*	123*	131*
<u>Yakima River System</u>							
Yakima River	100	69	Apr-Sep	213	192	131	145
nr. Martin <u>4/</u>	92	69	Apr-Jul	192	179	123	134
	84	72	Apr-Jun	160	139	114	116
Yakima River	674	70	Apr-Sep	1300	1300	866	968
at Cle Elum <u>5/</u>	625	71	Apr-Jul	1354	1179	803	885
	560	73	Apr-Jun		934	723	762
Yakima River	1010	58	Apr-Sep		2873	1491	1738
nr. Parker <u>6/</u>	1015	59	Apr-Jul		2620	1512	1722
	950	60	Apr-Jun		2153	1461	1583
Kachess River	85	66	Apr-Sep	196	172	115	128
nr. Easton <u>7/</u>	80	66	Apr-Jul	182	163	112	122
	75	70	Apr-Jun	153	130	104	107
Cle Elum River	340	70	Apr-Sep	750	627	435	485
nr. Roslyn <u>8/</u>	315	71	Apr-Jul	673	568	402	445
	270	72	Apr-Jun	538	433	350	373
Bumping River	102	68	Apr-Sep	234	193	129	150
nr. Nile <u>9/</u>	94	68	Apr-Jul	209	174	122	138
	82	72	Apr-Jun	156	124	107	114

* Thousands of Miners' inches.

4/ Observed flow corrected for storage in Lake Keechelus.

5/ Observed flow corrected for storage in Keechelus, Kachess and Cle Elum Lakes and diversion by Kittitas Canal.

6/ Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation and Sunnyside Canals.

7/ Observed flow corrected for storage in Lake Kachess.

8/ Observed flow corrected for storage in Lake Cle Elum.

9/ Observed flow corrected for storage in Bumping Lake.

Streamflow Forecasts - March 1973 (Cont.)

Basin, Stream and Station	Forecast Runoff 1973	% 15-Yr. Avg.	Seasonal Streamflow in Thousands of Acre-Ft			
			Fore- cast Period	1972	1971	15-Yr. Average 1953-67

Yakima River System (Cont.)

American River	88	68	Apr-Sep		172	128	129
nr. Nile	82	68	Apr-Jul		154	120	120
	72	73	Apr-Jun		113	106	99

Tieton River

at Tieton Dam <u>10/</u>	176	70	Apr-Sep	396	326	244	251
	149	69	Apr-Jul	338	272	207	215
	121	70	Apr-Jun	261	198	172	172

Naches River

nr. Naches <u>11/</u>	585	65	Apr-Sep		1140	841	899
	535	65	Apr-Jul		1039	779	819
	470	67	Apr-Jun		823	694	698

Ahtanum Creeks

nr. Tampico <u>12/</u>	33	69	Apr-Sep		63	43	49
	30	67	Apr-Jul		57	39	45
	27	68	Apr-Jun		48	35	40

Lower Columbia River System

Mill Creek	20	69	Apr-Sep		30	27	29
nr. Walla Walla	17	68	Apr-Jul		26	23	25
	15	65	Apr-Jun		24	21	23

Lewis River

at Ariel <u>13/</u>	1020	75	Apr-Sep		1827	914	1358
	870	73	Apr-Jul		1605	798	1197
	780	74	Apr-Jun		1341	723	1059

Cowlitz River blw.

Mayfield Dam	1620	75	Apr-Sep		2800	1615	2160
	1390	73	Apr-Jul		2463	1425	1908
	1210	75	Apr-Jun		1935	1245	1612

Cowlitz River

at Castle Rock <u>14/</u>	2030	72	Apr-Sep		3710	2134	2818
	1770	71	Apr-Jul		3253	1873	2487
			Apr-Jun		2585	1652	2119

OLYMPIC PENINSULA

Dungeness River System

Dungeness River	125	73	Apr-Sep		196	136	172
nr. Sequim	104	74	Apr-Jul		154	115	141
	79	75	Apr-Jun		105	89	105

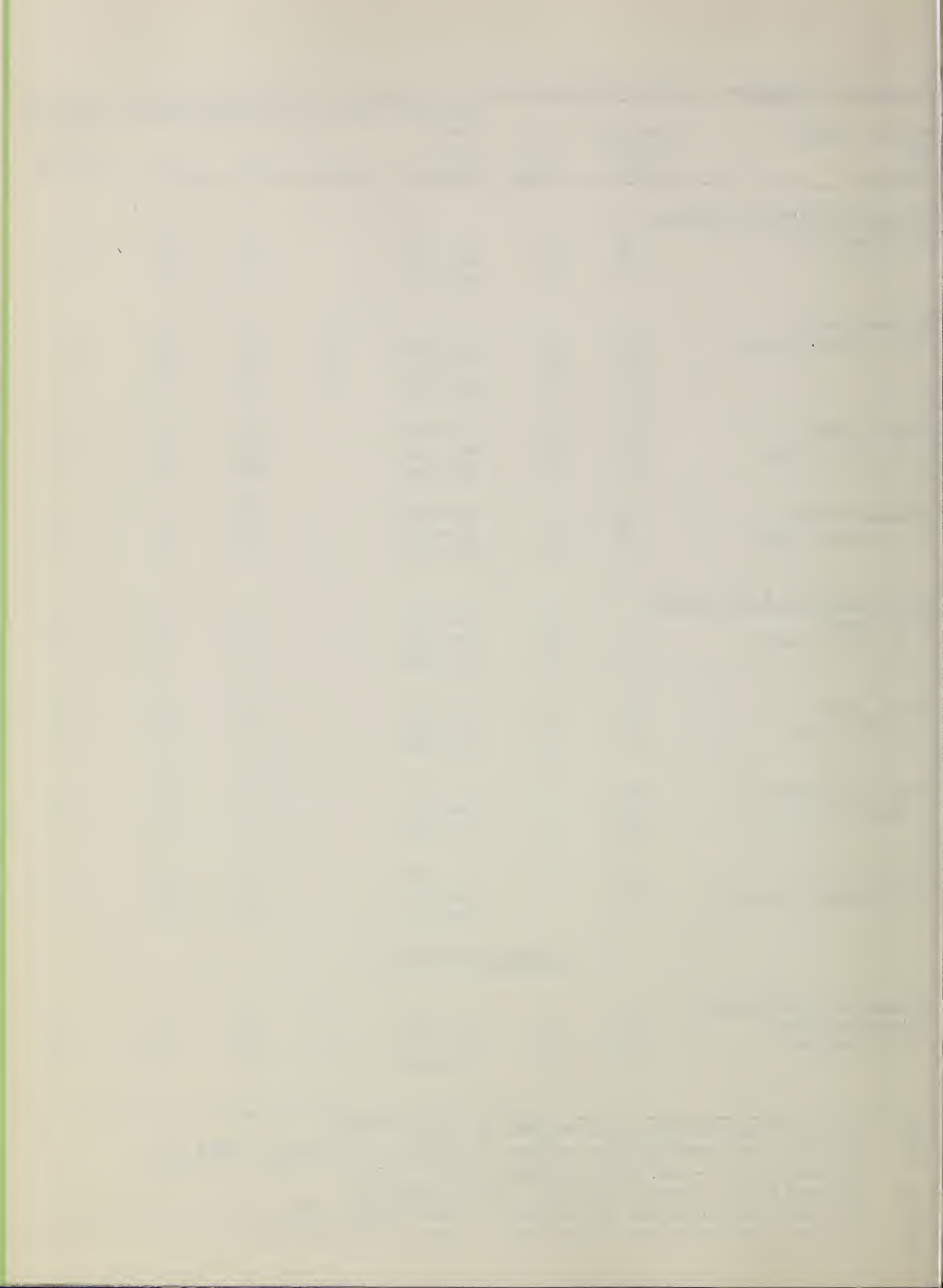
10/ Observed flow corrected for storage in Rimrock Lake

11/ Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals and City of Yakima.

12/ Observed flow of North and South Forks (combined).

13/ Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

14/ Observed flow corrected for storage in Mayfield Reservoir.



COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about March 1, 1973, as per cent of the same date in 1972 and 1971 and average of record.

Tributary Basin	No. of Courses Average	1973 Snow Water Expressed as percent of		
		1972	1971	1953-67
<u>UPPER COLUMBIA BASIN</u>				
Pend Oreille	14	46	54	59
Kettle	15	57	63	70
Colville	5	67	64	65
Spokane	10	32	44	52
Okanogan	36	46	62	68
Methow	8	46	56	74
Chelan	9	51	59	81
Entiat	8	44	57	70
Wenatchee	9	29	38	54
Yakima	11	27	43	51
Ahtanum	Not Available			
<u>LOWER COLUMBIA</u>				
Mill Creek	3	24	55	46
White Salmon	2	40	30	48
Wind	1	17	16	33
Lewis	7	23	26	45
Cowlitz	8	26	31	47
<u>PUGET SOUND</u>				
Nisqually	4	26	34	50
White	3	37	53	69
Green	6	24	29	48
Cedar	6	16	19	33
Snoqualmie	3	21	26	38
Skykomish	4	34	40	60
Skagit	15	34	45	62
Nooksack	4	51	60	--
<u>OLYMPIC PENINSULA</u>				
Skokomish	4	47	49	79
Elwha	1	41	53	56
Dungeness	1	44	60	63



RESERVOIR STORAGE - 1000 Feet

BASIN or STREAM	RESERVOIR	USABLE ^{1/}	1973	Measured (March)		
		CAPACITY		1972	1971	Normal*
<u>COLUMBIA</u>						
Spokane	Coeur d'Alene Lake	225.1	53.3	248.0	154.2	149.4
Columbia	Franklin D. Roosevelt Lake	5232.0	3729.1	2735.6	4666.2	2985.2
Columbia	Banks Lake	761.8	613.3	714.9	712.2	511.7
Okanogan	Conconully Reservoir	13.0	11.6	9.6	5.8	6.1
Okanogan	Salmon Lake	10.5	9.5	8.6	2.1	8.5
Chelan	Lake Chelan	676.1	141.4	126.5	257.0	243.7
<u>YAKIMA</u>						
Yakima	Keechelus Lake	157.8	102.0	151.9	123.0	99.0
Kaches	Kachess Lake	239.0	195.0	179.0	201.1	178.5
Cle Elum	Lake Cle Elum	436.9	319.1	312.1	231.3	266.0
Bumping	Bumping Lake	33.7	9.1	9.2	5.2	11.0
Tieton	Rimrock Lake	198.0	153.3	139.6	122.9	124.1
<u>PUGET SOUND</u>						
Skagit	Ross Reservoir	1202.0	870.3	680.1	912.7	851.6
Skagit	Diablo Reservoir	90.6	89.0	83.8	83.4	85.9
Skagit	Gorge Reservoir	9.8	8.1	7.3	8.3	- -

^{1/} Based on Active Storage

* 15-year average 1953-67



SOIL MOISTURE - MARCH

Drainage Basin and Station	Number	Elev.	Profile Depth	Inches Total Capacity	Soil Moisture Content (Inches) as of Mar. 1		
					1973	1972	1971
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	7.7	8.1	9.8
Krause	18B4m	2420	48	13.6	7.0	7.0	6.2
Sheffels	18B5m	2380	48	13.6	8.2	8.8	7.7
Sherman	18B7m	2440	48	13.6	6.8	7.4	7.8
Wheatridge	18B6m	2290	48	13.6	6.7	8.7	10.5
<u>OKANOGAN</u>							
Salmon Meadows	19A2M	4500	48	5.4	2.3	3.6	3.6
Trout Creek	3-M	3600	48	7.3	3.2*	4.3*	2.9*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	5.2	-	5.0
Lake Cle Elum	21B14M	2200	48	12.8	9.2	-	9.2
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	7.6	10.8	10.1
Helmerts	17C2M	4400	48	12.0	10.6	11.6	10.7
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	8.9	10.0	10.1

* February Readings

FALL SOIL MOISTURE

Drainage Basin and Station	Number	Elev.	Profile	Inches	Soil Moisture Content		
			Depth	Total Capacity	(Inches) as of Oct. 1	1972	1971
<u>CRAB CREEK</u>							
Jack Woods	18B3m	2750	48	13.6	5.6	5.3	7.0
Krause	18B4m	2420	48	13.6	6.2	5.0	4.4
Sheffels	18B5m	2380	48	13.6	6.5	5.3	4.4
Sherman	18B7m	2440	48	13.6	4.6	4.0	3.8
Wheatridge	18B6m	2290	48	13.6	6.2	5.5	7.8
<u>OKANOGAN</u>							
Salmon Meadows	19A02M	4500	48	5.4	2.8	2.7	1.7
Trout Creek	3-M	3600	48	7.3	3.3	3.3	3.4*
<u>YAKIMA</u>							
Domery Flat	21B20m	2200	48	6.9	4.1	2.1	2.4
Lake Cle Elum	21B14M	2200	48	12.8	8.7	7.1	7.6
<u>WALLA WALLA</u>							
Couse	17C3m	3650	48	11.1	6.0	6.2	5.9
Helmers	17C2M	4400	48	12.0	7.7	8.2	7.3
<u>WENATCHEE</u>							
Upper Wheeler	20B7M	4400	48	12.7	5.7	6.5	5.1

* November 1 measurement

PRECIPITATION ^{1/}

Division Averages and Departures

Drainage Divisions	FALL		WINTER	
	Sept - Oct Average	1972 <u>2/</u> Departure	Nov - 1972 - Feb - 1973 <u>2</u> Average	Departure
Columbia in Canada	4.15	+ 0.26	8.17	- 3.02
Pend Oreille - Spokane	2.68	- 1.20	11.20	- 4.28
Northeastern Washington	2.16	- 0.09	7.26	- 2.19
Southeastern Washington	2.35	- 0.30	8.59	- 1.75
Central Washington	3.48	- 0.96	18.05	- 5.63
North Central Washington	1.04	- 0.37	4.02	- 1.52
Northwest Slope Cascades	10.41	- 1.26	34.55	- 9.96
Southwest Slope Cascades	6.56	- 1.16	26.23	- 8.26

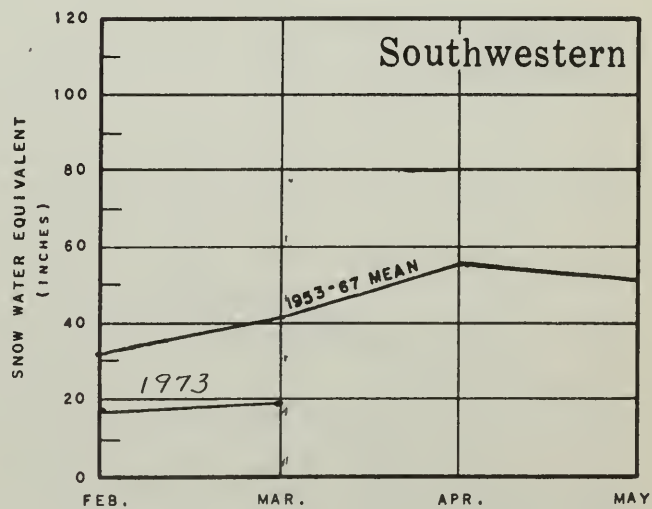
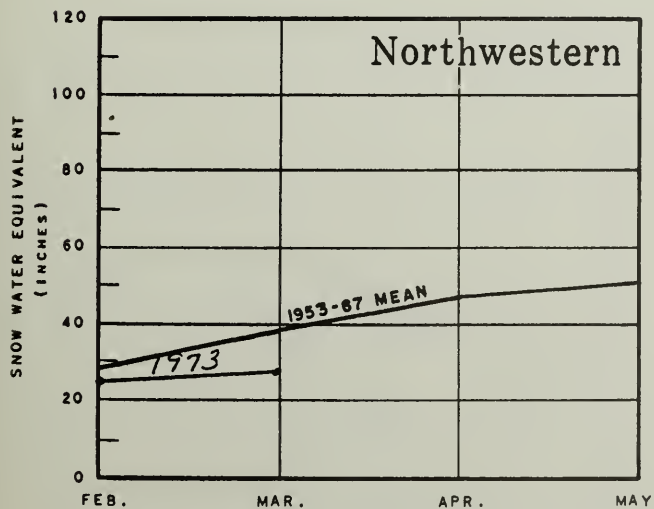
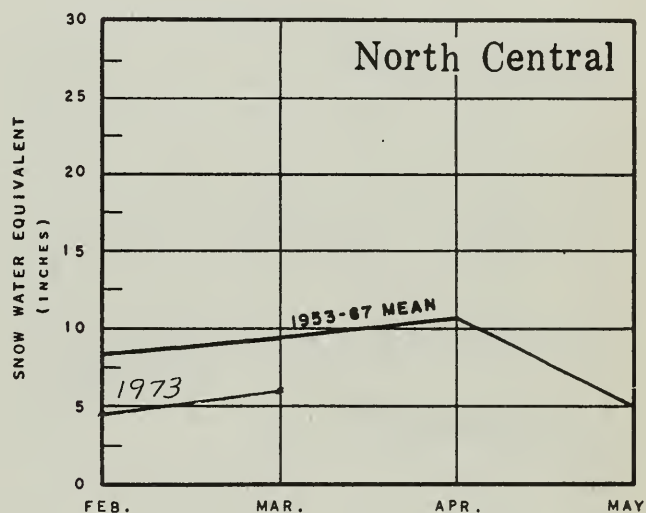
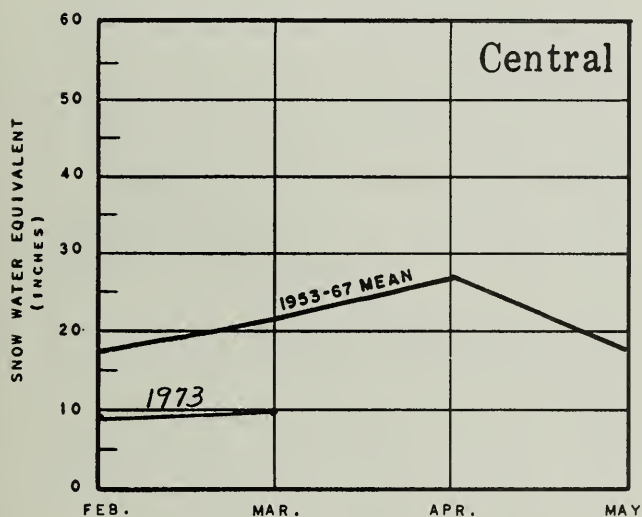
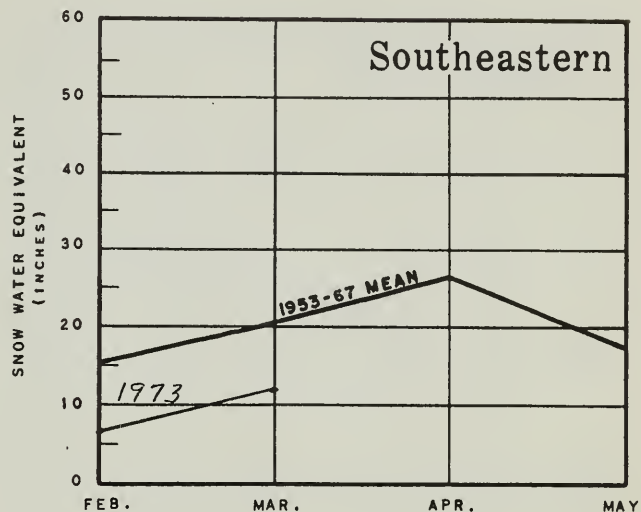
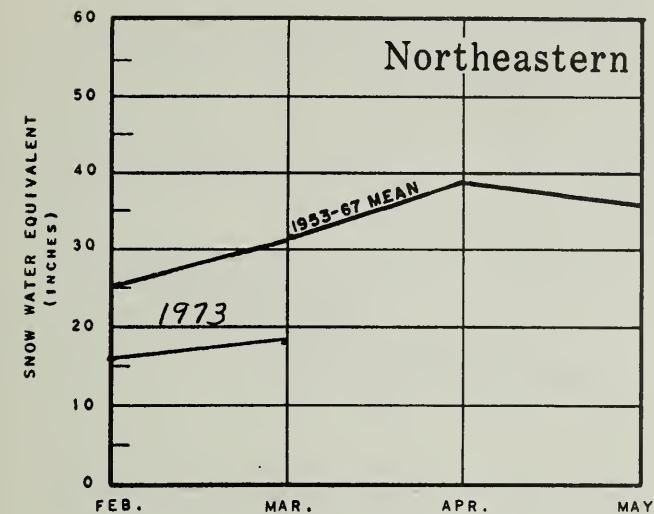
Northeastern Washington	- Lower Spokane, Colville, Sanpoil and lower Kettle drainages.
Southeastern Washington	- Touchet, Tucannon and Palouse drainages.
Central Washington	- Yakima, Wenatchee and Chelan drainages.
North Central Washington	- Methow and Okanogan drainages.
Northwest Slope Cascades	- Puget Sound drainages.
Southwest Slope Cascades	- Lower Columbia drainages.

1/ - Preliminary analysis by National Weather Service from data furnished by Meteorological Services of Canada and National Weather Service.

2/ - Departure from 15-year (1953-67) drainage division average.

WASHINGTON SNOW COVER

DRAINAGE AREAS

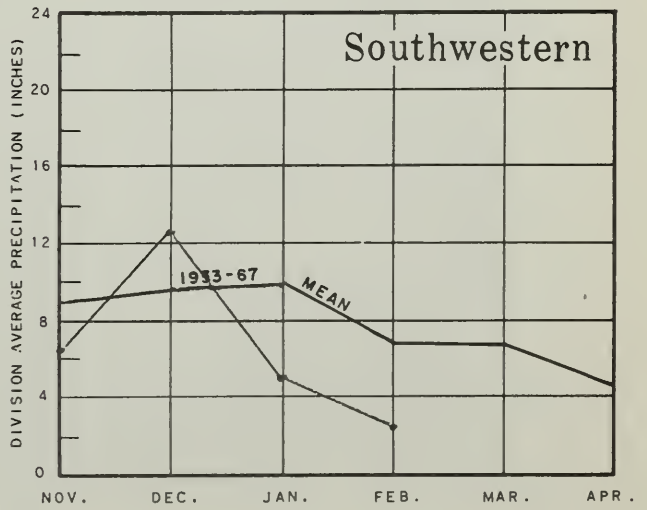
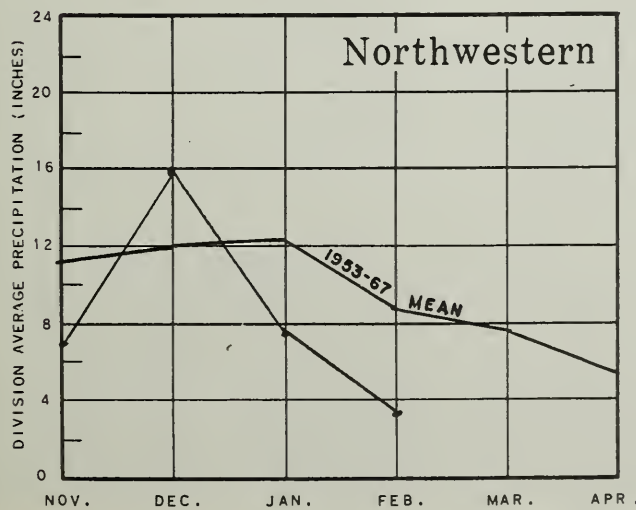
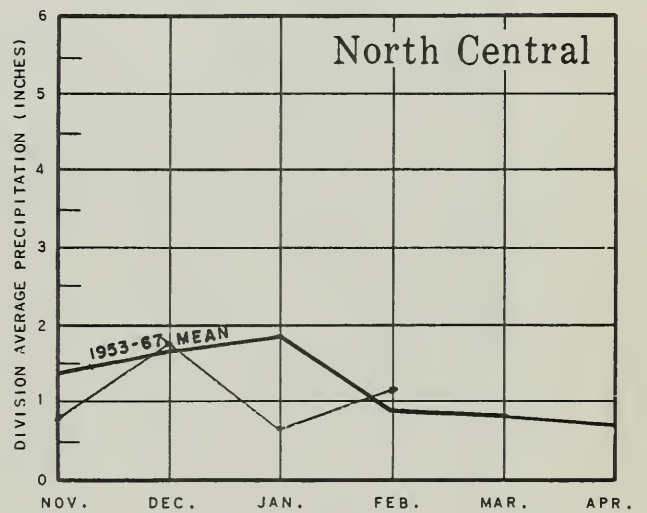
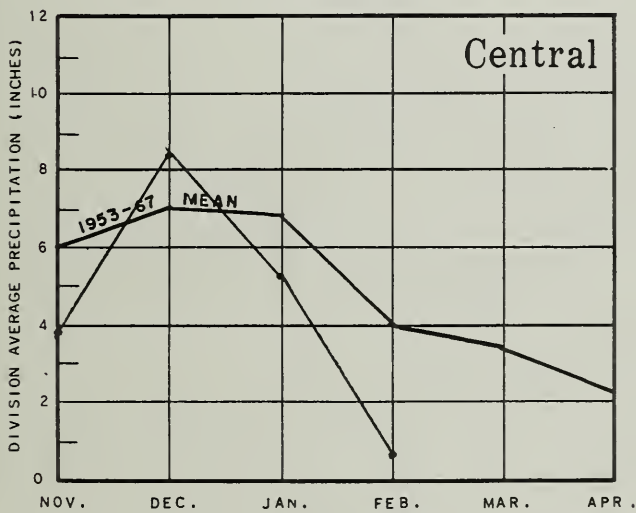
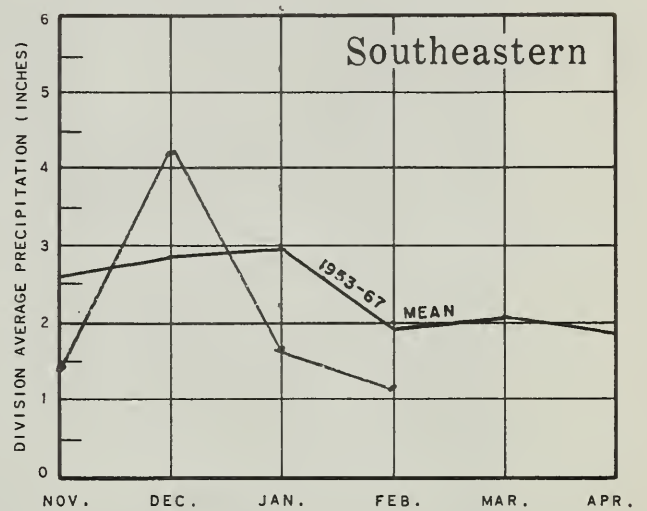
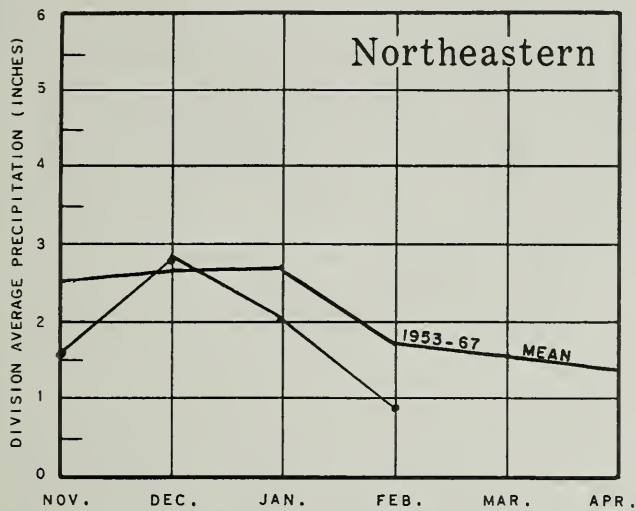


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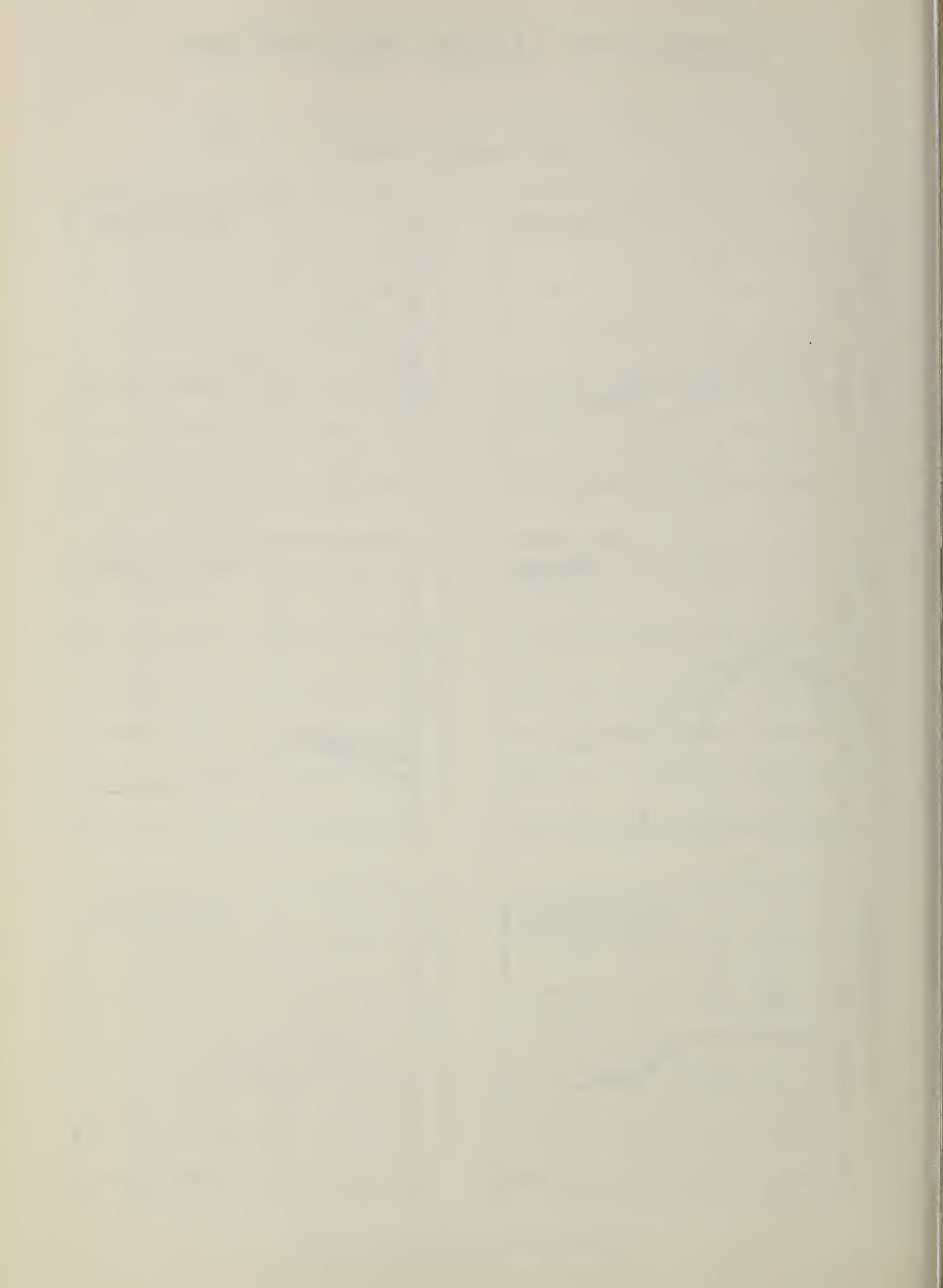


WASHINGTON VALLEY PRECIPITATION

DRAINAGE AREAS



Preliminary Analysis by National Weather Service



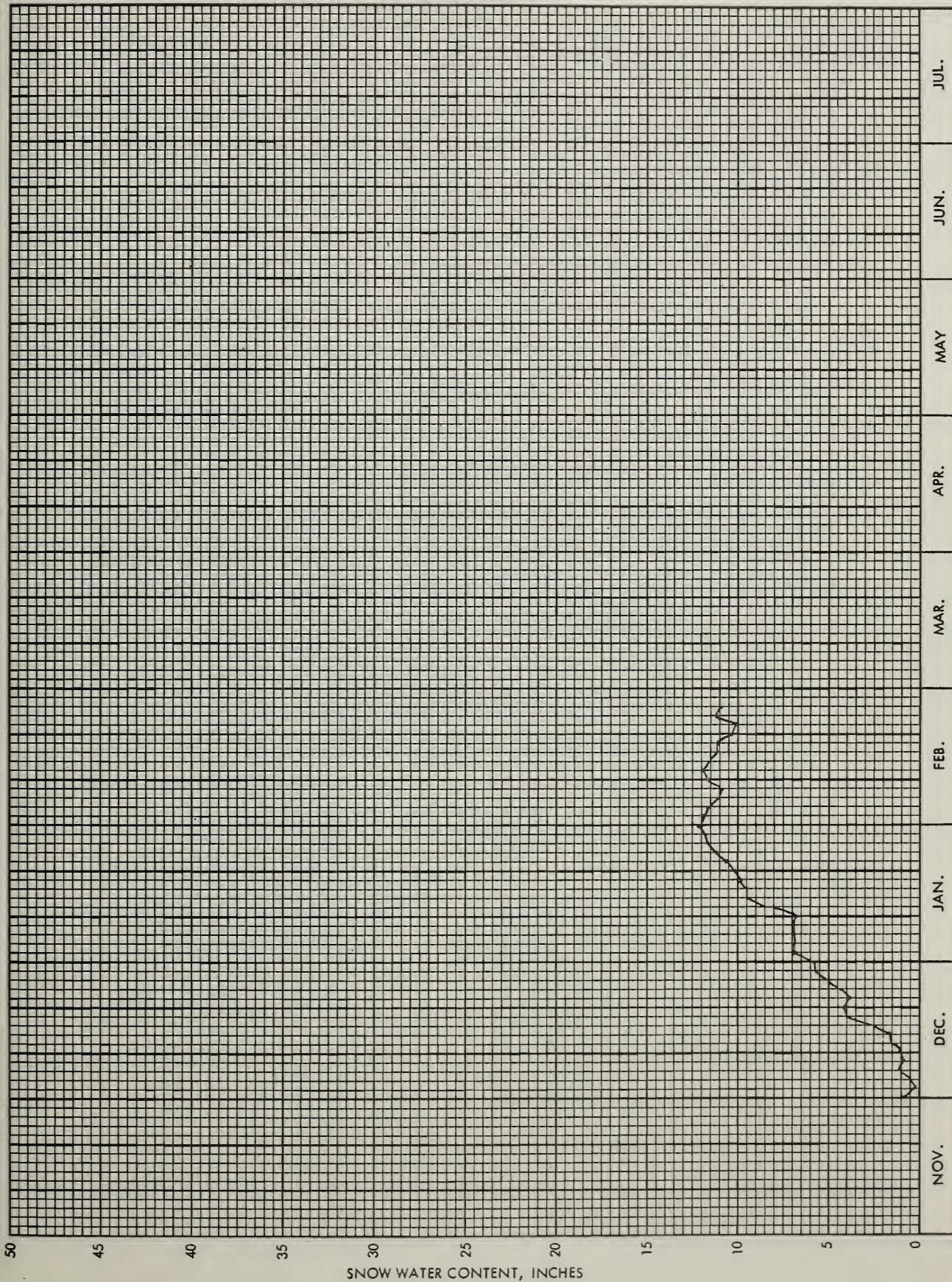
SNOW PILLOW DATA

1972 - 1973

Berne-Mill Creek

Sec. 13 T. 26N R. 14E No. 21B41SP Drainage: Wenatchee R.

Lat. 47° 45' Long. 121° 42' Elev. 3240





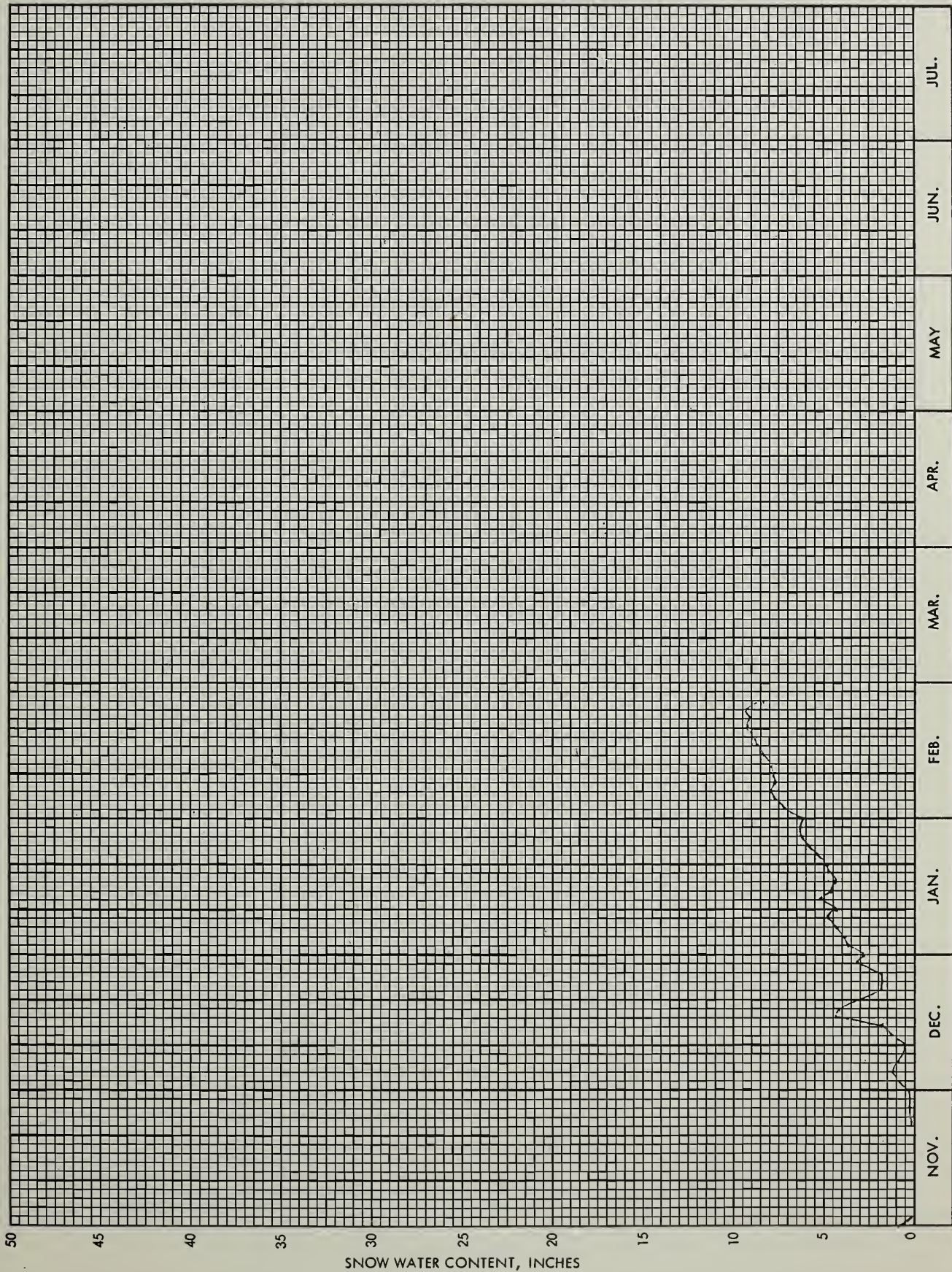
SNOW PILLOW DATA

1972 - 1973

Cougar Mountain - FS

Sec. 21 T. 21N R. 9E No. 21B42SP Drainage: Green River

Lat. 47° 17' Long. 121° 40' Elev. 3200'



SNOW WATER CONTENT, INCHES

SNOW DATA TO MARCH 1, 1973 - APPENDIX 1

SNOW DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average [#]

U P P E R C O L U M B I A D R A I N A G EPEND OREILLE RIVER

Baree Creek	15B11	5500	3/2	84	29.7	64.5	43.5
Baree Midway	15B16	4600	3/1	59	19.9	53.9	33.8
Baree Trail	15B15	3800	3/1	4	1.6	17.4	8.2
Benton Meadow	16A02	2344	2/27	10	2.7	4.3	5.8
Benton Spring	16A03	4900	2/27	37	12.6	22.0	18.2
Boyer Mountain	17A02	5250	2/26	55	17.8	24.0	23.4
Brush Creek	14A04	5000	2/27	26	6.6	16.8	11.7
Chewelah	17A04	4923	2/24	37	10.2	12.4	16.5
Heart Lake Trail	14C10	4800	2/27	27	8.2	39.2	20.2
Hoodoo Basin	15C10	6000	2/27	86	31.5	68.6	45.6
Hoodoo Creek	15C01	5900	2/27	80	29.4	68.8	42.5
Lookout	15B02	5250	3/1	55	17.9	49.3	32.3
Mosquito Ridge +	16A04A	5100	2/23	67	24.2	43.2	33.8
Nelson	19-Can	3050	2/28	36	10.6	18.5	14.6*
Schweitzer Bowl	16A06	4500	2/27	60	21.2	37.0	----
Schweitzer Ridge	16A05	6100	2/27	90	32.0	49.7	----
Winchester Creek	17A03	2970	2/26	23	6.2	12.0	11.5

KETTLE RIVER

Barnes Creek	90-Can	5300	2/26	35	13.8	23.9	18.4*
Big White Mtn.	154-Can	5500	2/28	48	14.0	20.0	17.3*
Boulder Road	18A02	1450	Not Measured			4.6	4.3
			2/26	6	2.2	5.7	3.5
Butte Creek	18A03	4070	Not Measured			8.6	8.1
			2/26	29	7.1	9.7	8.7
Cabin Creek	18A08	3170	Not Measured			8.2	7.5
			2/26	22	5.7	8.7	7.7
Carmi	126-Can	4100	2/28	16	3.8	9.0	6.3*
Farron # 1	17-Can	4000	2/28	36	11.4	13.2	12.4*
Farron # 2	243-Can	4000	2/28	35	10.2	New Course	
Goat Creek	18A04	3595	Not Measured			7.0	6.9
			2/26	20	4.9	7.0	6.6
Graystoke Lake	5-Can	5950	2/23	42	14.0	23.5	----
Monashee Pass	48A-Can	4500	2/26	35	10.3	17.4	13.7*
Old Glory Mtn.	42-Can	7000	2/26	57	14.1	32.2	24.8*
Snow Caps Creek	18A05	2150	Not Measured			5.2	4.6
			2/26	6	2.5	5.5	4.2
Snow Caps Trail	18A06	2720	Not Measured			7.2	6.1
			2/26	14	3.0	7.0	6.1

Average based on 1953-67 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO MARCH 1, 1973 - APPENDIX 2

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
Summit G. S.	18A07	4600	Not Measured			----	8.0
			2/26	27	6.0	----	8.3
Trapping Creek Lower	166-Can	3050	2/28	13	2.7	7.2	5.4*
Trapping Creek Upper	165-Can	4450	2/28	29	7.6	12.6	9.1*

COLVILLE RIVER

Baird	17A06	3215	2/24	21	5.7	8.6	7.0
Carlson	18A09	2885	2/24	8	2.3	4.6	4.8
Chewelah	17A04	4925	2/24	37	10.2	12.4	16.5
Stranger Mountain	17A05	4990	2/24	34	8.9	10.8	12.4
Togo	18A10	3370	2/24	20	6.0	11.3	9.4

SPOKANE RIVER

Above Burke	15B08	4100	3/1	29	8.7	29.2	----
Above Roland	15B07	4350	Not Measured				
Below Roland	15B06	3770	Not Measured				
Copper Ridge	16B02	4800	2/28	30	10.7	34.2	26.0
Forty-nine Meadows	15B03	5000	2/27	44	14.6	----	----
Fourth of July Summit	16B03	3100	2/27	6	1.9	13.2	----
Granite Peak	15B13A	6000	2/26	80	26.3	----	41.8
Kellogg Peak	16B05A	5560	Not Measured			42.5	----
Lookout	15B02	5250	3/1	55	17.9	49.3	32.3
Lost Lake	15B14A	6000	3/3	92	30.7	----	----
Lower Sands Creek	16B01	3400	2/28	24	7.1	21.1	17.8
Medicine Ridge	15B04A	6150	2/27	79	25.9	----	43.6
Mosquito Ridge +	16A04A	5110	2/23	67	24.2	43.2	33.8
Outlaw Creek	15B12A	3750	Not Measured			23.6	13.7
Roland Summit	15B05A	5200	Not Measured			54.7	34.6
Sherwin	16C01	3200	2/27	18	5.2	24.8	14.1
Sunset	15B09A	5600	Not Measured			52.6	29.9

OKANOGAN RIVER

Aberdeen Lake	6-Can	4300	2/28	18	3.7	8.6	6.1*
Blackwall Peak	100-Can	6250	2/28	58	22.0	52.6	36.3*
Bouleau Creek	31-Can	5000	3/3	33	9.0	14.3	10.7*
Bouleau Lake	234-Can	4580	2/24	38	9.8	16.8	----
Brenda Mine	193-Can	4800	2/26	32	9.4	19.5	13.7*
Brookmere	27-Can	3200	2/26	19	4.5	13.0	9.2*
Carrs Landing Lower	167-Can	2250	2/24	6	0.9	4.8	2.0
Carrs Landing Upper	168-Can	3200	2/24	13	2.6	7.2	4.8*
Clark +	19A08a	7000	Not Measured			29.7	18.0

Average based on 1953-67 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO MARCH 1, 1973 - APPENDIX 3

SNOW DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
						Last Year	Average #
NAME	Number	Elevation					
<u>OKANOGAN RIVER (Cont.)</u>							
Enderby	130-Can	6250	2/28	89	26.9	43.8	33.5*
Esperon Creek Lower	164-Can	4400	2/25	31	8.4	14.9	11.4*
Esperon Creek Middle	163-Can	4700	2/25	36	9.1	16.8	14.2*
Esperon Creek Upper	162-Can	5400	2/25	40	10.4	20.1	17.7*
Freezeout Meadows New	20A38	5000	2/28	56	19.9	77.2	----
Graystoke Lake	5-Can	5950	2/23	42	14.0	23.5	----
Hamilton Hill	107-Can	4900	2/27	33	9.7	26.6	14.4*
Harts Pass	20A05A	6500	2/24	79	29.3	62.6	38.5
Horseshoe Basin +	19A05a	7000	2/27	32	10.2	28.4	11.6
Isintok Lake	152-Can	5510	2/24	22	5.8	14.1	7.7*
Lost Horse Mountain	105-Can	6300	3/2	27	6.1	20.0	8.7*
Loup Loup	19A07	4650	2/28	23	6.6	12.0	8.9
McCulloch	4-Can	4200	2/25	21	4.3	9.0	6.3*
Missezula Mountain	106-Can	5100	Not Measured			----	8.8*
Mission Creek	5A-Can	6000	2/24	43	12.4	23.3	17.7*
Monashee Pass	48A-Can	4500	2/26	35	10.3	17.4	13.7*
Mount Kobau	156-Can	5950	3/1	30	7.5	15.3	12.6*
Muckamuck +	19A09a	6390	Not Measured			18.5	----
Mutton Creek No. 1	19A01	5700	2/27	36	9.5	21.8	12.3
Mutton Creek No. 2	19A04	6000	2/26	35	8.9	20.1	12.7
Mutton Creek No. 2 SP	19A11SP	6000	2/26	--	6.4	New Installation	
New Copper Mountain	46A-Can	4300	2/26	14	3.7	12.5	6.1*
New Penticton Res. #2	183-Can	5225	2/26	24	5.6	12.3	----
Nickel Plate Mtn.	47-Can	6200	2/27	19	4.8	13.1	7.2*
Oyama Lake	203-Can	4400	2/25	21	5.7	7.6	6.4*
Paysayten +	20A28a	4300	2/27	31	9.9	----	14.2
Postill Lake	55-Can	4500	2/27	24	5.0	9.9	7.5*
Quartette Lake	34-Can	4000	2/26	24	6.6	----	----
Rusty Creek	19A03	4000	2/27	18	4.6	10.2	7.0
Salmon Meadows	19A02	4500	2/26	28	6.8	13.4	9.7
Silver Star Mountain	99-Can	6050	2/25	58	19.0	32.6	24.1*
Starvation Mtn +	19A10a	6750	Not Measured			21.8	----
Summerland Reservoir	3A-Can	4200	2/25	23	6.0	15.0	8.9*
Touts Coulee	19A06	2845	2/27	7	2.2	6.1	3.7
Trout Creek	3-Can	4700	2/27	20	4.7	13.2	6.5*
Vaseux Creek	233-Can	4600	Not Measured			9.0	----
White Rocks Mountain	70-Can	6000	2/27	54	16.6	27.5	18.8*

METHOW RIVER

Billy Goat Pass +	20A10a	6409	Out This Year			----	25.8
Dollar Watch +	20A29a	7000	2/27	55	17.6	41.4	23.7

Average based on 1953-67 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
Harts Pass	20A05A	6500	2/24	79	29.3	62.6	38.5
Horseshoe Basin +	19A05a	7000	2/27	32	10.2	28.4	11.6
Loup Loup	19A07	4650	2/28	23	6.6	12.0	8.9
Mutton Creek No. 1	19A01	5700	2/27	36	9.5	21.8	12.3
Mutton Creek No. 2	19A04	6000	2/26	35	8.9	20.1	12.7
Mutton Creek No. 2 SP	19A11SP	6000	2/26	--	6.4	New Installation	
Rusty Creek	19A03	4000	2/27	18	4.6	10.2	7.0
Salmon Meadows	19A02	4500	2/26	28	6.8	13.4	9.7
War Creek Pass +	20A31a	6500	3/2	84	31.1	52.2	40.8

CHELAN LAKE BASIN

Cloudy Pass +	20A22a	6500	3/2	81	30.0	**	34.9
Greenwood Flat +	20A25a	3540	3/2	51	18.9	----	----
Little Meadows +	20A24a	5275	3/2	88	32.6	**	37.5
Lyman Lake	20A23A	5900	3/2	119	44.0	----	50.3
Park Creek Flat +	20A13a	2220	3/2	55	20.4	42.5	31.0
Park Creek Ridge	20A12A	4600	3/2	97	35.9	69.8	41.7
Petersons +	20A16a	3730	3/2	72	26.6	55.8	32.5
Rainy Pass	20A09	4780	2/24	75	27.4	58.4	37.0
Safety Harbor	20A30A	6300	3/2	60	22.2	**	27.2
War Creek Pass +	20A31a	6500	3/2	84	31.1	52.2	40.8

ENTIAT RIVER

Entiat Meadows +	20A33a	4800	2/23	87	31.7	64.7	42.7
Entiat River Trail +	20A34a	3150	2/23	36	11.9	30.7	20.4
Four Mile Ridge +	20B27a	7000	2/23	57	20.7	----	----
Fox Camp +	20A36a	6510	2/23	104	37.9	79.0	50.7
Blue Creek G. S.	20B28a	5425	2/23	74	26.9	New Course	
Pope Ridge	20B20	4300	2/26	36	11.7	28.3	17.3
Pugh Ridge +	20A32a	6400	2/23	70	25.5	56.7	31.0
Shady Pass	20A37	5000	2/27	55	19.8	----	----
Snow Brushy +	20A35a	3850	2/23	71	25.8	49.1	35.9
Tommy Creek +	20B21a	5300	2/23	43	15.7	43.7	25.9

WENATCHEE RIVER

Berne-Mill Creek	21B23	2925	2/15	44	15.0	36.3	24.0
			2/26	41	14.7	43.5	23.9
Berne-Mill Creek New SP	21B41SP	3240	2/26	34	11.7	33.0	21.7
Blewett Pass No. 2	20B02	4270	2/26	22	6.9	32.9	13.8
Chiwaukum G. S.	20B16	1810	2/15	19	4.5	19.4	10.5
			2/26	16	4.7	21.4	10.5

** Aerial Marker Buried

Average based on 1953-67 average

* Average for years of record

+ Snow water equivalent estimated from aerial stadia observation

SNOW DATA TO MARCH 1, 1973 - APPENDIX 5

SNOW

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average [#]
<u>WENATCHEE RIVER (Cont.)</u>							
Fish Lake	21B04	3371	2/24	47	17.8	55.2	31.7
Lake Wenatchee	20B05	1970	2/17	22	6.2	23.3	13.0
			2/26	18	6.2	26.8	13.4
Leavenworth R. S.	20B17	1127	2/12	8	3.1	10.8	4.3
			2/27	2	1.4	9.0	2.6
Lyman Lake	20A23A	5900	3/2	119	44.0	----	50.3
Merritt	20B18	2140	2/15	25	7.8	27.4	14.6
			2/26	23	7.8	30.6	13.7
Stevens Pass	21B01	4070	2/15	79	29.6	64.0	40.3
			2/26	76	29.6	77.3	44.4
Stevens Pass Sand Shed	21B45	3700	2/15	52	18.0	47.4	----
			2/26	47	18.3	55.0	----

SQUILCHUCK CREEK

Beehive Springs	20B03	4400	2/28	16	5.8	14.0	6.5
Scout-A-Vista	20B04	3400	2/28	17	5.8	13.0	7.0

STEMILT CREEK

Jump-Off	20B08	4450	2/27	21	7.2	15.8	6.8
Stemilt Slide	20B06	5000	2/28	31	10.6	24.1	12.6
Upper Wheeler	20B07	4400	2/28	15	6.6	21.0	8.5

COLOCKUM CREEK

Colockum Creek Upper	20B22	5300	2/27	28	9.5	24.0	----
Colockum Creek Lower	20B23	4300	2/27	20	6.2	16.2	----

YAKIMA RIVER

Ahtanum R. S.	21C11	3100	2/23	13	3.2	11.8	5.9
Big Boulder Creek	21B09	3200	2/24	28	8.9	34.2	18.5
Blewett Pass No. 2	20B02	4270	2/26	22	6.9	32.9	13.8
Bumping Lake	21C08	3450	2/13	26	7.9	20.6	15.1
			2/28	22	7.7	20.4	15.3
Bumping Lake New	21C36	3400	2/13	32	9.6	26.2	17.9
			2/28	28	10.2	26.9	18.0
Cayuse Pass	21C06	5300	3/1	122	45.4	112.8	71.6
Colockum Pass	20B09	5370	2/28	37	9.9	21.6	14.9
Cooke Creek	20B10	4123	2/28	7	3.5	14.1	5.6
Corral Pass	21C13	6000	2/27	62	22.2	65.2	33.2
Fish Lake	21B04	3371	2/24	47	17.8	55.2	31.7
Green Lake	21C10	6000	2/23	56	19.7	45.8	25.7

Average based on 1953-67 average

Date		Time		Location		Remarks	
1	10/1/20	10:00	10:30	10:00	10:30	10:00	10:30
2	10/2/20	10:00	10:30	10:00	10:30	10:00	10:30
3	10/3/20	10:00	10:30	10:00	10:30	10:00	10:30
4	10/4/20	10:00	10:30	10:00	10:30	10:00	10:30
5	10/5/20	10:00	10:30	10:00	10:30	10:00	10:30
6	10/6/20	10:00	10:30	10:00	10:30	10:00	10:30
7	10/7/20	10:00	10:30	10:00	10:30	10:00	10:30
8	10/8/20	10:00	10:30	10:00	10:30	10:00	10:30
9	10/9/20	10:00	10:30	10:00	10:30	10:00	10:30
10	10/10/20	10:00	10:30	10:00	10:30	10:00	10:30
11	10/11/20	10:00	10:30	10:00	10:30	10:00	10:30
12	10/12/20	10:00	10:30	10:00	10:30	10:00	10:30
13	10/13/20	10:00	10:30	10:00	10:30	10:00	10:30
14	10/14/20	10:00	10:30	10:00	10:30	10:00	10:30
15	10/15/20	10:00	10:30	10:00	10:30	10:00	10:30
16	10/16/20	10:00	10:30	10:00	10:30	10:00	10:30
17	10/17/20	10:00	10:30	10:00	10:30	10:00	10:30
18	10/18/20	10:00	10:30	10:00	10:30	10:00	10:30
19	10/19/20	10:00	10:30	10:00	10:30	10:00	10:30
20	10/20/20	10:00	10:30	10:00	10:30	10:00	10:30
21	10/21/20	10:00	10:30	10:00	10:30	10:00	10:30
22	10/22/20	10:00	10:30	10:00	10:30	10:00	10:30
23	10/23/20	10:00	10:30	10:00	10:30	10:00	10:30
24	10/24/20	10:00	10:30	10:00	10:30	10:00	10:30
25	10/25/20	10:00	10:30	10:00	10:30	10:00	10:30
26	10/26/20	10:00	10:30	10:00	10:30	10:00	10:30
27	10/27/20	10:00	10:30	10:00	10:30	10:00	10:30
28	10/28/20	10:00	10:30	10:00	10:30	10:00	10:30
29	10/29/20	10:00	10:30	10:00	10:30	10:00	10:30
30	10/30/20	10:00	10:30	10:00	10:30	10:00	10:30
31	10/31/20	10:00	10:30	10:00	10:30	10:00	10:30

SNOW DATA TO MARCH 1, 1973 - APPENDIX 6

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average #
<u>YAKIMA RIVER (Cont.)</u>							
Grouse Camp	20B11	5385	Not Measured			24.9	16.1
High Creek	20B12	2930	2/26	9	3.7	13.6	5.1
Joe Lake +	21B46a	4624	2/22	75	27.8	----	----
Lake Cle Elum	21B14M	2200	Not Measured			22.0	8.5
			3/2	6	1.8	22.2	8.5
Lemah Creek +	21B47a	3327	2/22	60	22.2	65.5	----
Manashtash	20C01	3935	2/27	7	2.0	9.1	4.0
Morse Lake	21C17	5400	2/26	94	36.5	----	47.0
Nanum	21B39	2340	Not Measured			18.9	9.8
Olallie Meadows	21B02	3625	2/23	38	15.0	79.1	40.4
Satus Pass	20D01	4030	2/28	0	0.0	15.8	8.0
Stampede Pass SP	21B10	3860	2/15	--	19.0	53.0	34.8
			3/1	--	20.6	49.8	38.4
Trail Creek	20B14	3360	2/28	0	0.0	10.1	----
Tunnel Avenue	21B8	2450	2/15	34	10.2	31.3	20.2
			2/28	28	9.6	33.8	21.6
Van Epps Pass +	20B26a	5925	2/22	74	27.4	----	----
Walters Flat	20B15	3360	2/26	9	3.4	13.7	6.6
Waptus Lake +	21B49a	3024	2/22	57	21.1	69.3	----
White Pass (E. Side)	21C28	4500	2/14	32	9.3	46.4	21.5
			2/26	29	10.1	48.7	21.1
White Pass (L. Lake)	21C27	4500	Not Measured			----	22.6
			2/27	29	11.2	49.1	26.1

AHTANUM CREEK

Ahtanum R. S.	21C11	3100	2/23	13	3.2	11.8	5.9
Green Lake	21C10	6000	2/23	56	19.7	45.8	25.7

LOWER COLUMBIA DRAINAGEASOTIN CREEK

Spruce Springs	17C04	5700	2/27	36	11.0	32.7	----
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MILL CREEK

Homestead	17A01	4030	2/28	9	3.5	15.5	7.4
Martin Springs	17C02	4400	2/28	13	4.4	23.2	12.5
Tollgate	18D3M	5070	2/27	35	12.0	38.2	21.0

Klickitat River

Satus Pass	20D01	4030	2/28	0	0.0	15.8	8.0
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Average based on 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation



SNOW DATA TO MARCH 1, 1973 - APPENDIX 7

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #

WHITE SALMON RIVER

Cultus Creek	21C12	4000	2/24	54	19.3	66.3	38.9
Surprise Lakes	21C13A	4250	2/24	49	19.5	37.3	42.0

WIND RIVER

Old Man Pass	21D19	3100	2/24	17	5.2	31.0	15.8
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LEWIS RIVER

Blue Lake +	21C22a	4800	2/24	104	38.5	118.8	70.4
Bob's Trail	21C21	2200	2/24	12	3.3	28.8	12.4
Calamity Ridge +	21D1a	2500	2/24	1	0.3	17.5	----
Council Pass +	21C18a	4200	2/24	49	19.6	71.3	34.8
Cultus Creek	21C12	4000	2/24	54	19.3	66.3	38.9
Divide Meadow +	21C29a	5600	2/24	62	23.6	99.9	47.7
Grand Meadow	21C25	3500	2/24	27	9.5	44.0	22.9
Lone Pine Shelter	21C26	3800	2/27	44	15.9	60.4	31.4
Marble Mountain +	22C05a	3200	2/24	24	9.4	52.5	28.5
Mosquito Meadows	21C19	4100	2/27	46	16.7	62.0	34.4
New Muddy River	22C06	1400	2/24	0	0.0	16.1	9.6
Old Man Pass	21D19	3100	2/24	17	5.2	31.0	15.8
Plains of Abraham +	22C1a	4400	2/24	94	34.8	86.4	55.7
Smith Creek Road	22C04	2100	2/24	14	5.2	29.1	13.9
Spencer Meadow +	21C20a	3400	2/24	23	8.0	37.3	20.5
Surprise Lakes	21C13A	4250	2/24	49	19.5	85.0	42.0
Table Mountain +	21C24a	4200	2/24	60	22.8	70.4	40.6
Timbered Peak +	21D18a	3000	2/24	12	5.2	22.1	16.4

COWLITZ RIVER

Cayuse Pass	21C06	5300	3/1	122	45.4	112.8	71.6
Mosquito Meadows	21C19	4100	2/27	46	16.7	62.0	34.4
Ohanapecosh	21C32	2200	2/27	5	3.0	28.6	14.8
Packwood Lake	21C31	2870	2/27	6	2.0	30.1	12.0
Pigtail Peak	21C33	5900	2/14	82	31.2	96.8	53.9
			2/27	85	33.0	94.3	52.7
Plains of Abraham +	22C01a	4400	2/24	94	34.8	86.4	55.7
Potato Hill	21C14	4500	2/27	39	14.0	57.8	25.7
White Pass (E. Side)	21C28	4500	2/14	32	9.3	46.4	21.5
			2/26	29	10.1	48.7	21.1
White Pass (L. Lake)	21C27	4500	Not Measured			----	22.6
			2/27	29	11.2	49.1	26.1
Willame Creek	21C30	3250	2/27	28	10.6	50.0	27.0

Average based on 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation



SNOW DATA TO MARCH 1, 1973 - APPENDIX 8

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #

PUGET SOUND DRAINAGENISQUALLY RIVER

Ghost Forest	21C04	4550	2/26	52	22.0	79.5	38.8
Longmire	21C03	2760	2/26	4	1.5	25.2	8.4
New Paradise Park	21C35	5500	2/26	94	38.4	105.0	57.9
Stem Glade	21C01	5050	2/26	88	36.1	105.9	59.4

WHITE RIVER

Cayuse Pass	21C06	5300	3/1	122	45.4	112.8	71.6
Corral Pass	21C13	6000	2/27	62	22.2	65.2	33.2
Morse Lake	21C17	5400	2/26	94	36.5	----	47.0

GREEN RIVER

Airstrip	21B24	1800	2/27	0	0.0	9.0	----
Charley Creek	21B25	1200	2/27	0	0.0	0.0	----
Cougar Mountain SP	21B42SP	3200	2/23	17	7.6	35.2	----
Grass Mtn. No. 2	21B27	2900	2/27	22	8.5	36.1	18.1
Grass Mtn. No. 3	21B28	2100	2/27	0	0.0	15.2	----
Lester Creek	21B29	3100	2/27	30	10.9	37.5	20.7
Lynn Lake	21B50	4000	2/27	12	4.2	47.6	----
Sawmill Ridge	21B29	4700	2/27	43	16.1	59.5	36.5
Snowshoe Butte SP	21B43SP	5000	2/23	71	29.0	95.0	----
Stampede Pass SP	21B10	3860	2/15	--	19.0	53.0	34.8
			3/1	--	20.6	49.8	38.4
Twin Camp	21B30	4100	2/27	31	11.7	36.2	24.9

CEDAR RIVER

City Cabin	21B03	2390	2/27	11	4.2	30.2	14.8
Mt. Gardner	21B21	3300	2/26	4	1.5	31.5	15.4
Mt. Lindsay	21B16	2500	2/26	16	6.8	26.4	12.9
Mt. Washington New	21B50	3000	2/26	0	0.0	21.0	----
Rex River	21B17	2400	2/26	16	6.0	29.1	12.1
S. F. Cedar	21B06	3000	2/27	14	5.3	36.1	19.2
Tinkham Creek	21B20	3400	2/27	20	6.7	38.1	20.6

SNOQUALMIE RIVER

Alpine Meadow	21B48	3500	2/28	41	15.9	71.3	----
Lake Elizabeth	21B19	2900	2/28	33	12.8	60.6	33.1
Olallie Meadows	21B02	3625	2/23	38	15.0	79.1	40.4
S. F. Tolt	21B18	1900	2/28	0	0.0	6.8	----

Average based on 1953-67 average

SNOW DATA TO MARCH 1, 1973 - APPENDIX 9

SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (Inches)	
NAME	Number	Elevation				Last Year	Average #
<u>SKYKOMISH RIVER</u>							
Lake Elizabeth	21B19	2900	2/28	33	12.8	60.6	33.1
Stevens Pass	21B01	4070	2/15	79	29.6	64.0	40.3
			2/26	76	29.6	77.3	44.4
Stevens Pass S. Shed	21B45	3700	2/15	52	18.0	47.4	----
			2/26	47	18.3	55.0	----
<u>SKAGIT RIVER</u>							
Beaver Creek Trail	21A06	2200	2/24	21	8.0	24.3	14.0
Beaver Pass	21A01	3680	2/24	48	16.7	48.8	29.3
Brown Top Ridge	21A28a	6000	2/24	109	43.2	93.6	----
Cloudy Pass	20A22a	6500	3/2	81	30.0	**	34.9
Devils Park	20A04	5900	2/24	81	30.5	68.6	39.1
Freezeout Cr. Trail	20A01	3500	2/28	25	8.6	24.2	12.6
Freezeout Meadows New	20A30	5000	2/28	56	19.9	77.2	----
Granite Creek	21A29	3500	2/24	34	11.6	32.4	----
Harts Pass	20A05A	6500	2/24	79	29.3	62.6	38.5
Hozomeen Lake	21A02	2600	2/28	11	4.2	15.5	9.0
Klesilkwa	35B-Can	3700	3/1	18	5.6	29.9	----
Lyman Lake +	20A23A	5900	3/2	119	44.0	----	50.3
Meadow Cabins	20A08	1900	3/1	5	2.5	17.1	7.2
New Hozomeen Lake	21A30	2800	2/28	18	7.0	20.5	----
New Tashme	26A-Can	2500	2/27	13	4.6	22.6	----
Quartette Lake	34-Can	4000	2/26	24	6.6	----	----
Rainy Pass	20A09	4780	2/24	75	27.4	58.4	37.0
Thunder Basin	20A07	4200	3/1	43	13.4	33.6	20.5
<u>BAKER RIVER</u>							
Baker Pass +	21A27a	4900	Not Measured			----	----
Dock Butte	21A11A	3800	2/13	100	47.0	----	----
			Not Measured			99.4	65.3
Easy Pass	21A07A	5200	2/13	86	41.0	----	----
			Not Measured			114.7	82.1
Jasper Pass	21A06A	5400	2/13	148	69.0	----	----
			Not Measured			125.5	87.3
Marten Lake	21A09A	3600	2/13	120	57.0	----	----
			Not Measured			114.3	73.3
Mount Blum +	21A18a	5800	2/13	106	50.0	----	----
			Not Measured			81.0	62.8
Panorama New	21A26	4300	3/1	118	48.7	95.3	----
Panorama SP	21A25SP	4300	Not Measured			----	----

Average based on 1953-67 average

** Aerial marker buried

+ Snow water equivalent estimated from aerial stadia observation



SNOW

DRAINAGE BASIN and/or SNOW COURSE			THIS YEAR			PAST RECORD	
			Date of Survey	Snow Depth (Inches)	Water Content (Inches)	Water Content (inches)	
NAME	Number	Elevation				Last Year	Average †

BAKER RIVER (Cont.)

Rocky Creek	21A12A	2100	2/13	36	17.0	----	----
			Not Measured			53.1	23.3
Schreibers Meadow	21A10A	3400	2/13	74	35.0	----	----
			Not Measured			79.2	58.1
S. F. Thunder Creek	21A14A	2200	2/13	10	5.0	----	----
			Not Measured			42.3	4.5
Watson Lakes	21A08A	4500	2/13	96	45.0	----	----
			Not Measured			97.2	61.3

NOOKSACK RIVER

Bald Mountain +	21A19a	4400	3/2	78	30.4	**	----
Canyon +	21A20a	5100	3/2	129	50.3	**	----
Glacier Creek	21A23	3700	3/1	29	9.8	36.9	----
Panorama New	21A26	4300	2/15	114	44.7	77.5	----
			3/1	118	48.7	95.3	----
Panorama SP	21A25SP	4300	Not Measured			----	----
Twin Lakes +	21A21a	5200	3/2	146	56.9	**	----

O L Y M P I C P E N I N S U L ADUNGENESS RIVER

Deer Park	23B04	5200	2/28	43	13.1	29.9	20.9
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MORSE CREEK

Cox Valley	23B14	4500	2/25	63	22.5	55.0	----
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ELWHA RIVER

Hurricane	23B03	4500	2/24	37	12.1	29.7	21.8
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SKOKOMISH RIVER

Black & White	23B07	4200	2/24	65	26.1	51.2	32.3
Black & White Lakes	23B06	4700	2/24	93	41.4	73.4	49.4
Four Streams	23B10	3000	2/24	35	12.9	38.9	----
Home Sweet Home	23B05	5200	2/24	112	46.7	99.7	64.2
Sundown Pass	23B08	3900	Not Measured			----	45.4

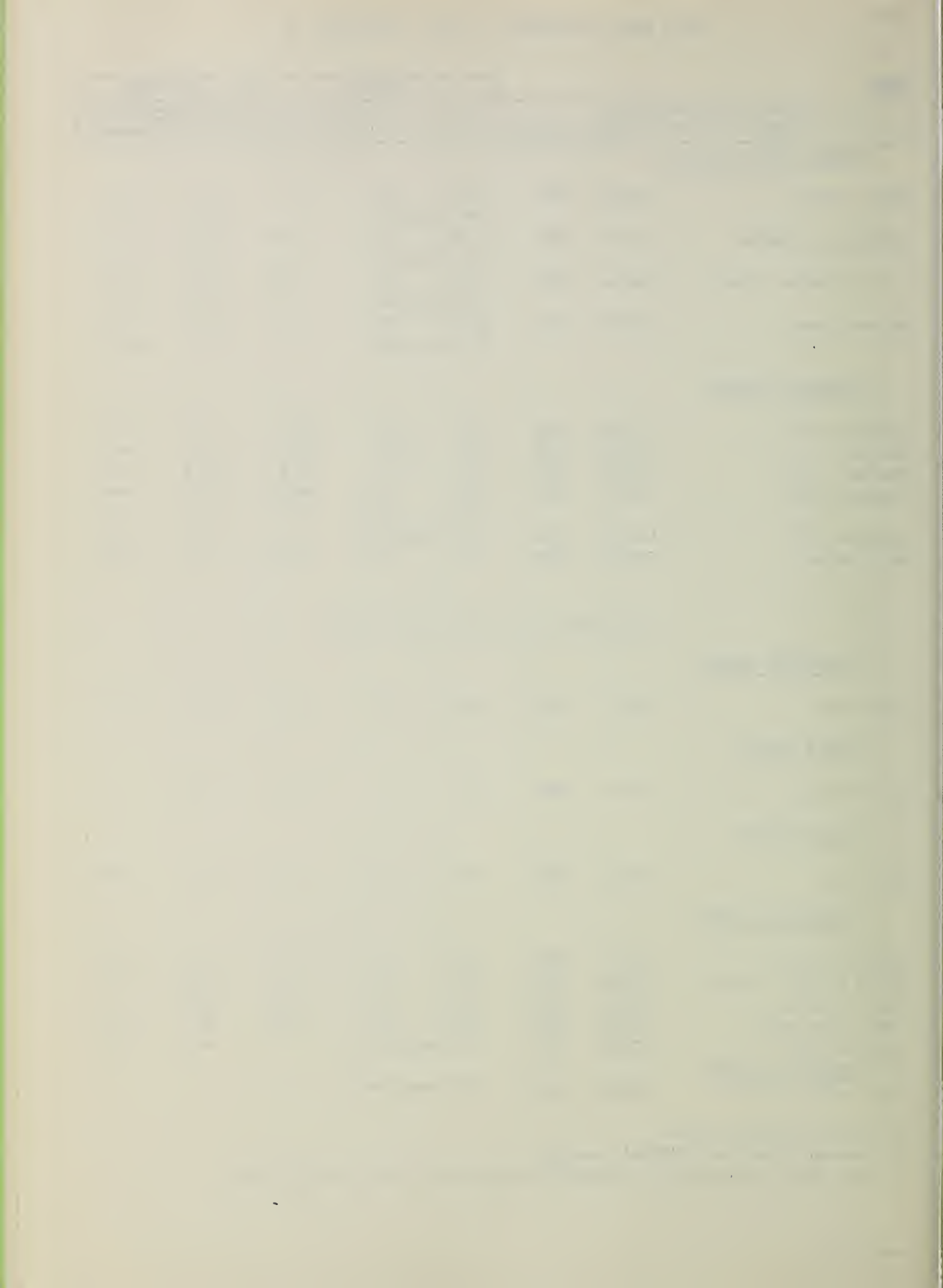
SOLEDUCK RIVER

Deer Lake	23B01	3900	Not Measured				
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** Aerial marker buried

† Average based on 1953-67 average

+ Snow water equivalent estimated from aerial stadia observation



Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Department of Lands, Forests and Water Resources,
Water Resources Service, British Columbia

States:

Washington State Department of Ecology
Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers
U. S. Department of Agriculture
Forest Service
U. S. Department of Commerce
NOAA, National Weather Service
U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District
Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma
City of Seattle

Other organizations and individuals furnish valuable information for snow survey reports. Their cooperation is gratefully acknowledged.

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